

Claims

I claim:

1. A measuring apparatus for measuring the load of an elevator including a car suspended by a tension member within a hoistway, a termination at one end of the tension member, a mounting plate for attaching the termination relative the hoistway, and a hitch for attaching the termination to the mounting plate, the apparatus comprising:

a load cell positioned between the hitch and the mounting plate wherein the load cell generates a signal proportional to the load and wherein the load cell defines a hole for allowing the termination to pass therethrough.

2. The measuring apparatus of claim 1 wherein the load cell comprises an annular shape

3. The measuring apparatus of claim 2 further comprising a self-aligning washer located between the hitch and the load cell to maintain the hitch in a position normal to the load cell.

4. The measuring apparatus of claim 3 wherein the self-aligning washer is spherical in shape.

5. The measuring apparatus of claim 1 wherein the elevator car is adapted to move along a guiderail positioned in the hoistway, and wherein the mounting plate is fixed to the guiderail.

6. The measuring apparatus of claim 1 further includes a beam locating at the top of the hoistway and wherein the mounting plate is attached to the beam.

7. The measuring apparatus of claim 1 wherein the hoistway is defined by an elevator shaft and the mounting plate is attached to the elevator shaft.

8. The measuring apparatus of claim 6 wherein the termination is attached to the beam.
9. A measuring apparatus for measuring the load of an elevator including a car suspended by plurality of tension members within a hoistway, and a termination at one end of each of the plurality of tension members, the apparatus comprising:
 - a mounting plate for attaching the plurality of terminations relative the hoistway,
 - a plurality of hitches for attaching each of the plurality of terminations to the mounting plate; and
 - multiple load cell positioned between each of the plurality of hitches and the mounting plate wherein each load cell generates a signal proportional to the load.
10. The measuring apparatus of claim 9 wherein each load cell defines a hole for allowing an associated termination to pass therethrough.
11. The measuring apparatus of claim 10 further comprising multiple self-aligning washers located between an associated hitch and load cell to maintain the hitch in a position normal to the load cell.
12. The measuring apparatus of claim 11 wherein each of the self-aligning washers is spherical in shape.
13. The measuring apparatus of claim 9 wherein the elevator car is adapted to move along a guiderail positioned in the hoistway, and wherein the mounting plate is fixed to the guiderail.
14. The measuring apparatus of claim 9 further includes a beam locating at the top of the hoistway and wherein the mounting plate is attached to the beam.

15. The measuring apparatus of claim 9 wherein the hoistway is defined by an elevator shaft and the mounting plate is attached to the elevator shaft.
16. The measuring apparatus of claim 14 wherein the termination is attached to the beam.